

Enabling Research Tools for Sustained Climate Assessment

The U.S. Global Change Research Program Sustained Assessment process benefits from long-term investments in Earth science research that enable the scientific community to conduct assessment-relevant science. To this end, NASA initiated several research programs over the past five years to support the Earth observation community in developing indicators, datasets, research products, and tools to support ongoing and future National Climate Assessments. These activities complement NASA's ongoing Earth science research programs. One aspect of the assessment portfolio funds four "enabling tools" projects at NASA research centers. Each tool leverages existing capacity within the center, but has developed tailored applications and products for National Climate Assessments. The four projects build on the capabilities of a global atmospheric reanalysis (MERRA-2), a continental U.S. land surface reanalysis (NCA-LDAS), the NASA Earth Exchange (NEX), and a Regional Climate Model Evaluation System (RCMES). Here, we provide a brief overview of each enabling tool, highlighting the ways in which it has advanced assessment science to date. We also discuss how the assessment community can access and utilize these tools for National Climate Assessments and other sustained assessment activities.

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